Unstable Economies, Unpaid Costs

Alex Pentland and Sandro Lera, MIT Connection Science

Summary: *Recently, the French Senate approved a law that imposes a 3% tax on revenue generated from digital services by companies above a certain size. Does this make sense as a general policy for every country to copy or it is just protectionism? We argue that a digital services are a special case of products with low or zero transaction cost (costs of transportation, payment, etc), and that this not only makes the global economy prone to monopolization, but undermines long-term viability by hurting labor and consumer markets. Our analysis shows that a ranked (ordinal) distance tax …e.g., based on city, state, and national structure…rewards efficiency and encourages greater innovation and efficiency while at the same time keeping the global economy stable and local economies viable.*

In recent decades we have seen on-line and mobile technologies have driven the transaction costs of retail merchandise and services toward zero and become nearly independent of place or distance. Economics generally hold that drops in transaction costs are an unalloyed good since they make the economy more efficient…for instance, this is the reason generally given for the existence of corporations. But as transaction costs go toward zero and distance becomes irrelevant then even small differences in price or quality drive markets to be dominated by the single best provider. The “mind share” of the this winning provider is dramatically amplified by network effect, reducing their customer acquisition costs. Their larger cash flow and customer base reduces their costs and increases their market value allowing them to invest to reduce production costs further and monopolize their markets.

Such a winner-takes-all dynamic reduces competition of course, but just as importantly it amplifies costs not reflected in product or service price. Closing a local store means that employees have the cost of looking for other work. When many stores close it makes the local economy less resilient to shocks and less attractive to live in. The consequence of winner-take-all goods and services is that young workers move to a few large cities, and small cities become increasingly elderly. Social costs such as education, health services, and policing, normally paid for by local taxes, become unsustainable.

A wholistic, system view is the reduction of transaction and distribution costs is doing is increasing efficiency by moving the dollar costs off the books but increasing "costs" like lower local investment and lower local employment. While the dollar cost of the goods and services is lower, the total cost may be higher.  
  
An obvious possible solution is an "ordinal tax" pays for costs such as carbon footprint, roads, and local public services such as police, healthcare, and education. One implementation of this idea is to tax based on government administrative boundaries, for instance, if a digital transaction generates activity that is purely local then it attracts a low tax, if it is cross-state their is a higher tax, and international transactions get the highest tax.  Although it is hard to measure economic activity generated online, the price of the ad is an easily accessible proxy for value, and the place of origin for the good/service advertised is a reasonable measure of which level of infrastructure tax should apply.

Using simple economic modeling (see http://..................), we have shown that such a ranked (ordinal) distance tax is likely to continue to reward efficiency and innovation, and may in fact encourage more diverse innovation. At the same time such a tax can be used to support education, health, and similar labor and consumer services, particularly if it is tied to government administrative regions, thus helping local economies maintain their viability.

The ordinal tax is similar in spirit to, but more dynamic than a country border tax. Most importantly, different products can be treated differently Specialized products, for instance, can traded without tax such that innovation spreads globally. Products that are easy to produce remain local. Competition is encouraged and independent of a firm’s location, so there is no a priori protectionism. Today, unfortunately, our society taxes online activity in exactly the opposite manner: there tax for local activity but none for longer distance activity. Our analysis suggests that this sort of digital tax reform would be extremely beneficial if applied generally and uniformly, and should be debated by international harmonization bodies such as the WTO, the OECD, or the ITU.